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# EDITORIAL NOTES

**Education Not a Science**

Education is not yet a science. We cannot predict — we but guess at the result of the teaching process. The theory of education supposes the consistent development of high moral character; practice produces types radically different, representing every degree of virtue and iniquity. The outcome of a given course of instruction, of certain methods of teaching, in terms of human life, no one can foretell. When the alchemist sought to transmute the baser metals into fine gold, slag was the uniform result. The teacher can do little better; his products are at best but alloys of uncertain value.

The occupation of the craftsman is different. With given materials and proper tools, his results are definitely predictable. His processes, once fixed, may be represented by formulas which may be carried out ever after by a machine.

**Marks of a Craft and a Science**

The methods of science are exact. The chemist combines and dissociates the elements according to an established order. When the order is discovered, he is relieved of concern as to the nature of the result. The flame will always explode gunpowder, and water never will. The electric spark under fixed conditions will combine hydrogen and oxygen, forming water. Such transformations of matter belong to the domain of true science. The processes, because regular and exact, are scientific. The operations may be relied upon implicitly to give a definite result. In this they are wholly unlike the guesses of alchemy.

**Complexity of the Teacher's Problem**

The teacher's problem is peculiar. He is required to produce spiritual results of a definite type from material things. The agency by which this is accomplished is the transforming power of the child's mind. Given the subject-matter of science and history: by the intellectual digestive processes of the pupil, change this into virtue —

into character. To develop justice from geography, to evolve love from history, and to turn chemistry into honesty—these are the problems that confront the teacher, and for him there are no others.

When measured by the standards of science, teaching is a Black Art. Materials are selected at random, methods are a venture and the result a hope. Whether the spiritual output will be righteousness or the reverse, no one can predict. Education, therefore, is not yet a science.

**Emphasis on the Wrong Thing**

Teaching can never be reduced to mechanics, nor can its principles have the inflexibility of mathematical formulas. It is possible, however, to increase vastly the certainty of the product. This can be done by fixing the attention and by laying the emphasis upon the thing which society really needs—individual character. Most of the stress is now laid upon subject-matter—upon the *means* and not upon the *end.* Pupils are judged, finally, when it comes to promotion, by the knowledge they possess; whereas the chief concern should lie in what they have done with their knowledge. In school as well as outside, the individual should be required to stand, not upon what he is able to do, but upon what he has actually accomplished in contributing to the welfare of the whole. There is no reason why the teacher should longer deceive the pupils by holding up before them false standards. Society is not much interested in the actual amount of knowledge which the individual possesses, but it is mightily interested in what he does with it. When the teacher shows a like concern for this same thing, there will be less uncertainty as to the result of the educational process.

**Education a Black Art**

Chemistry grew from alchemy only as the chemist discovered all the facts involved in his processes and learned to give them due weight. Education will grow from Black Art into science only as the teacher learns to take into account all the factors that enter into growth, and as the processes of growth become understood. Teachers usually teach as though growth depended upon what the child can take in. So his chief concern is to select and present attractive material that the greedy senses may lay hold and suck their fill. But growth depends no less upon the spiritual result that comes out and again enters the original source of supply. As the leaves of the tree fall about its roots, and in turn stimulate and nourish new growth in its buds and branches, so it is what the pupils put back into their lives through virtuous action, no less than what they take in, that determines what the new growth shall be, and, indeed, whether there shall be new growth at all. Dammed-up knowledge turns stale and sour, and breeds moral disease. It clogs the wit that acquired it, and it benumbs the sympathies that would direct its use.

**Growth Measured by Action**

**Motive the Reagent**

The first care of the teacher, therefore, is to see that the pupil's knowledge is kept moving out into virtuous action. Education will become a science when methods of instruction insure, in every case, this result. The teacher therefore must look continually to the *motive*. It is the motive that transmutes the material things of the environment into the spiritual products of righteousness. As the motive becomes strong and well-defined, the outcome of the teaching process becomes predictable. It is only as we acquire the power to determine the motive that education can become a science.

**Growth of Motive**

The establishment of the motive is a part of growth itself. It depends upon the preservation of a delicate sensitiveness to genuine needs. Without this, there can be no motive, no certainty of action, no growth, and education remains a Black Art. The average school presents few actual needs to the pupils, and, consequently, they work without proper motive, and there is but little educative action. The life of the school is still stiffened by forms and traditions that originated in an era when the training of childhood was a matter of command, and when the teacher depended upon someone in authority rather than upon his own good judgment as to the needs of the pupils for the direction of his work.

The emphasis of the day must be laid upon the quality of action which the pupil puts into the school, rather than upon the quantity of knowledge which he gains. No curriculum can fully prognosticate this, nor can any set examination adequately find the measure of its worth. Extraneous tests are needless and irrelevant. Inside the school, as elsewhere, life must justify itself through its quality at every step; its worth must be self-demonstrated every moment.

W. S. J.